REMARKS

Reconsideration and allowance are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-10 and 34 are pending in this application.

Claims 1, 3, 6 and 34 have been amended.

Claims 11-33 have been canceled based on Applicant's election from a restriction requirement.

Regarding the Claim Objections

Applicant appreciates the examiner's withdrawal of the previous objections to the claims.

Regarding the Claim Rejections under 35 USC § 112

Claims 1-10 and 34 were rejected under 35 USC § 112, 2nd paragraph, for being incomplete for omitting essential elements for a "serial communications system."

Applicant has amended Claims 1 and 34 such that the preamble recites "a serial communications link." This is supported in the originally filed specification at page 4, lines 17 and 18.

As such there are no omitted elements because a serial communications link is not necessarily an entire communications system. Furthermore, Claims 1 and 34 now include elements relating to the body of Claim 6 as requested by the Examiner. Applicant respectfully

requests that the § 112 Rejection be withdrawn and submits that there are no omitted essential elements in the Claims 1-10 and 34.

Regarding the 35 USC § 101 Rejection

Claims 1-10 and 34 were rejected under 35 USC § 101 because it was believed that the invention is directed to non-statutory subject matter.

Applicant has amended Claims 1, 6 and 34 such that their function cannot be carried out simply by hand or computer software. In particular, Claim 1 recites "a scrambler device" and "an ECC encoder device." Claim 6 recites "receiving an original data bit stream at a scrambler device." And, Claim 34 recites "a scrambler device programmed to convert a received bit stream." As such, Applicant respectfully submits that independent Claims 1, 6 and 34 are directed toward statutory subject matter and request that the § 101 Rejection be withdrawn.

Regarding the § 102 Rejection

Claims 1, 2, 5-8 and 34 were rejected under 35 USC § 102(e) for being anticipated by Adam (US Patent No. 6628725).

Applicant appreciates the Examiner's discussion of data bytes D1, D2 and D3 in step 302 and understands the Examiner's point. Applicant has amended Claim 1 to recite, among other things, "a scrambler device for receiving an original <u>data bit stream</u>" (emphasis added). Applicant submits that a data bit stream includes data bits such as D1, D2 and D3 as well as other bits, such as K1, K2 and K3 shown in Adam at step 302. Adam, as discussed in column 4, lines 51-59, takes the original data bit stream, which includes data bits, D1, D2 and D3, and

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performs control character encoding between step 302 and 304. Then, between steps 304 and 306, Adam performs a step of scrambling. Applicant respectfully submits that Adam does not teach or anticipate scrambling an original data bit stream and converting said original data bit stream into scrambled data. Conversely, Adam teaches taking an original data bit stream and first performing control character encoding as shown in figure 2, step 204 or figure 3, step 302-304 of Adam.

In order to be clearer, Applicant respectfully points out that in Figure 1 of Adam, an original data stream 102 is encoded by an encoder 104 prior to being inserted into an FEC encoder 106. Adam discusses this at col. 3, line 4, stating, "Referring to FIG. 1, data stream 102 is input into an exemplary 48B/50B encoder 104. The data stream is encoded, using the steps outlined in FIG. 2, step 202 through 208, into an exemplary 48B/50B format." Adam goes on to discuss FIG. 2, wherein the original data has the control characters therein encoded and the bytes reordered in step 204 prior to being scrambled at step 206. In Adam at col. 3, starting at line 29, it states "FIG. 2 is a flowchart of an exemplary embodiment of an encoding process used to produce output in 48B/50B format...The encoding process encodes a data stream, including user data in byte form and control characters, prior to transmission over a serial link." At col. 3, line 44, Adam continues, "At step 204, the six characters are encoded which includes byte reordering and control character encoding and mapping. The control characters are mapped into 8-bit control words and the data characters are kept in byte form as 8-bit data words." Applicant points out that encoding of an original input data stream is done in Adam prior to step 206 wherein the encoded input data stream is then scrambled. See col. 4, starting at line 4. Furthermore, at col. 4, lines 51-59, Adam goes on to discuss how the data stream contains 3 data

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characters denoted as D1, D2 and D3 as well as control characters, denoted as K1, K2 and K3, and that the data stream is first encoded shown at step 304 prior to being scrambled at step 306. As such, Applicant strongly points out that Adam does not anticipate or render obvious a scrambler device for "receiving an original data bit stream and converting said original data bit stream into scrambled data." Instead, Adam only teaches scrambling a data bit stream after it has been received and encoded.

Claim 1 has been amended to recite a scrambler device for "receiving an original data bit stream and converting said original data bit stream into scrambled data." As discussed above, Adam does not teach, allude to, or anticipate a scrambling device for receiving an original data bit stream and converting said original data bit stream into scrambled data, but instead, Adam teaches a scrambler that receives a data bit stream that has already been encoded by an encoder. The encoder of Adam (not a scrambler device) receives the original data bit stream. Applicant respectfully submits that Claim 1 is not anticipated by Adam and requests that the § 102 rejection be withdrawn.

Claim 5 is dependent upon Claim 1 and is therefore not anticipated for at least the reasons discussed above with respect to Claim 1. Applicant respectfully requests that this § 102 Rejection be withdrawn and submits that Claim 5 is ready for allowance.

Claim 6 has been amended to recite a step of "receiving an original data bit stream at a scrambler device, said original data bit stream comprising data bits and other bits" and then "converting said original data bit stream into scrambled data...prior to performing another data function on said original data bit stream." Applicant points out that since Adam does not

anticipate or teach scrambling an original data bit stream, Claim 6 is not anticipated by Adam and is therefore ready for allowance.

With respect to independent Claim 34, this claim has been amended to recite, among other things, a "scrambler device programmed to convert a received bit stream, having data bits therein, into scrambled data, said received bit stream being without redundant bits and without being encoded prior to being scrambled." Since Adam only teaches scrambling after an original serial bit stream has been encoded, Applicant respectfully submits that Adam does not teach or anticipate Claim 34 and respectfully requests that the § 102 Rejection be withdrawn. Applicant respectfully submits that Claim 34 is ready for allowance.

With respect to Claims 2, 7 and 8, Claim 2 is dependent upon independent Claim 1 and is therefore not anticipated for the same reasons as discussed above with respect to Claim 1. Claims 7 and 8 are dependent upon Claim 6 and are therefore not anticipated for at least the same reasons as discussed above with respect to Claim 6. As such, Applicant respectfully submits that these claims are ready for allowance.

Regarding the § 103 Rejection

Claims 3, 4, 9 and 10 were rejected under 35 USC § 103(a) as being rendered obvious by Adam (US Patent No. 6628725) in view of Kimmit (US Patent No. 6738935).

Claims 3 and 4 are each dependant upon Claim 1, which recites "a scrambler device for receiving an original data bit stream and converting said original data bit stream into scrambled data." As discussed above, with respect to the § 102 Rejection, Adam does not teach, elude to, anticipate, suggest or render obvious receiving an original data bit stream at such a scrambler
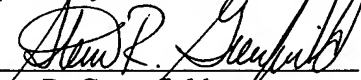
device. Furthermore, Kimmit does not remedy the inadequacies of Adam. As such, Applicant respectfully submits that Claims 3 and 4 are ready for allowance.

Claims 9 and 10 are dependant upon Claim 6 and are not rendered obvious because Adam and Kimmit do not teach, elude to, suggest or render obvious "receiving an original data bit stream at a scrambler device, said original data bit stream comprising data bits and other bits" and then "converting said original data bit stream into scrambled data, by said scrambler device, prior to performing another data function on said original data bit stream." As such, Applicant respectfully requests that the § 103 Rejection be withdrawn and submits that Claims 9 and 10 are ready for allowance.

Applicant respectfully requests entry of this amendment, reconsideration of this application and earnestly solicits an early Notice of Allowance.

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Respectfully submitted,

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